

NOTES FROM 04.27.05 PROTON DRIVER MEETING - CIVIL

Attendees: Bill Foster, Rich Stanek, Al Moretti, Chris Jensen, Bob Webber, Dixon Bogert, Rod Walton, Lee Hammond, Duane Plant, Elliott McCrory, Elaine McCluskey

ITEMS DISCUSSED:

1. **Horizontal versus vertical klystrons and the implications for the facility. Al brought drawings and information on klystrons and waveguides. Here are the conclusions from the meeting, including new information in specific areas:**
 - a. Reliability - how often does a klystron need to be replaced?
 - i. Currently in Fermilab linac, about 100,000 hours – today they move the transformer with its oil to a single location to pull out the klystron.
 - ii. With planned klystrons for PD, probably 40,000 hours per klystron, or with 36 klystrons, might be every 1000 hours of operation, or one every 40 days.
 - b. Horizontal arrangement:
 - i. Socket and solenoid go with klystron, but not shielding, probably. Need still to understand how shielding would be removed in place and klystron moved out.
 - ii. Shielding could be stainless steel instead of lead, but not sure at this time.
 - c. Vertical arrangement:
 - i. Could klystron be pulled out with solenoid? This reduces lifting height to about 2ft above the socket. This is much heavier than klystron alone
 - ii. Realignment of solenoid and klystron might take a lot of time.
 - iii. Quickest approach is to swap out dead klystron in place without moving or removing anything else
2. **“Quiet Room” in existing linac:**
 - a. Quiet for acoustical noise compared to surrounding linac
 - b. Place for diagnostics, has computers for monitoring
 - c. Need one in PD, more in the middle of the building length, approximately 15 ft square
 - d. Al agreed would be used heavily during commissioning
3. **325 MHz klystrons at front end**
 - a. Will be horizontal as Mike May has shown on his drawing of front end
 - b. Rack requirements will be for more racks than for typical station – show 16 racks (versus 8 or 12) for this area
 - c. Length can be whatever it has to be, not restricted by 60 ft module
 - d. Klystron outputs to waveguides will probably be from the top, not the side

ITEMS FOR NEXT MEETING:

- Discuss trench that is proposed for in the floor between the equipment and the non-aisle wall. Duane will bring drawing
- Start discussion of Debuncher area – invite John Reid, Maurice Ball

NEXT MEETING 5/4/05 AT 9:30 A.M. IN THE conFESSional WH5NE